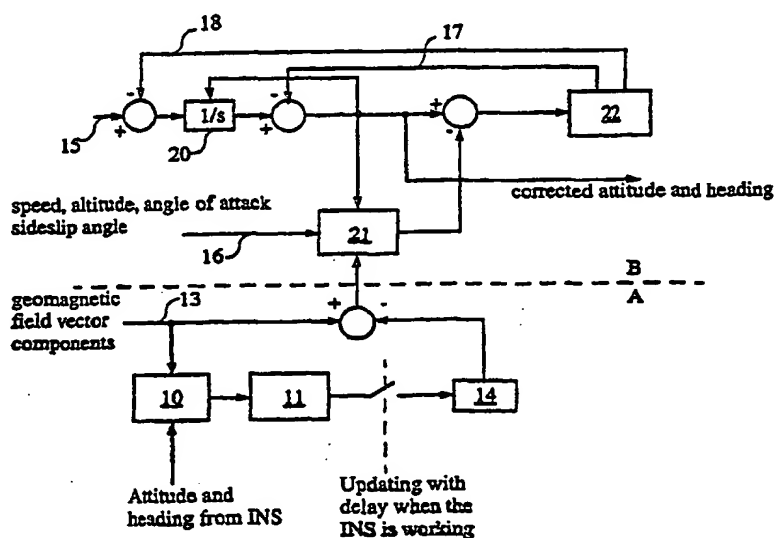




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(54) Title: REDUNDANT SYSTEM FOR THE INDICATION OF HEADING AND ATTITUDE IN AN AIRCRAFT



(57) Abstract

A method and an arrangement for synthetically calculating redundant attitude and redundant heading by means of existing data in an aircraft. In one embodiment the heading of the aircraft is available and in another embodiment the heading is calculated from a magnetic heading sensor. When the heading is available (redundant heading) attitude is calculated by weighting together the signals from and angular rate gyros (2) in the aircraft's flight control system, information from air data (altitude, speed, angle of attack) as well as information about heading (redundant heading). When the heading is not available, attitude and heading are calculated in one embodiment with the aid of Kalman filters (11, 22) by weighting together the signals from the angular rate gyros in the aircraft's control system, information from air data (altitude, speed, angle of attack and sideslip angle) as well as information from a magnetic heading detector existing in the aircraft.